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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/916,624

07/27/2001

Jenkin A. Richard

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03/19/2003

SAWYER LAW GROUP LLP
P O BOX 51418
PALO ALTO, CA 94303

EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,624

Applicant(s)

RICHARD ET AL.

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-87 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 28-30, 56-58, 81-83 and 85-87 are objected to because of the following informalities:

a. Claims 28, 56, 81 and 85 sets forth a “system conforming to an IEEE standard.”

The term IEEE standard does not set forth any metes-and-bounds.

b. Claims 29, 57, 82 and 86 sets forth a “system conforming to IEEE 802 standard.”

The metes-and-bounds of the limitation are subject to change in the event that the IEEE 802 standard is modified.

c. Claims 30, 58, 83 and 87 sets forth a “system conforming to one or more of a XAUI, XENPAK and XGP transceiver standard. The metes-and-bounds of the limitation are subject to change in the event that the XAUI, XENPAK or XGP transceiver standards are modified.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-87 are rejected under 35 U.S.C. 102(b) as being anticipated by Oono, et al. (US 5,223,970).

The examiner notes that any optical system that includes a prism that may be adjusted will read on the claimed invention. In other words, an optical system including any type of optical element in conjunction with a prism that may be adjusted will inherently teach the claimed invention of “(a) placing at least a first optical element in a first beam path; (b) fixing the first optical element in place without substantially compensating for errors in optical alignment,” (i.e., the optical element other than a prism in the system); “(c) placing at least a first optical alignment element (OAE) in the first beam path,” (i.e., the prism); “and (d) aligning the first beam path to a first desired beam path by adjusting the first OAE, wherein the alignment of the first beam path substantially compensates for cumulative alignment errors in the first beam path.” (i.e., adjustment of the prism)

Regarding claims 1, 27, 31, 55, 59, 63 and 84, Oono discloses an adjustable prism (Fig. 3, ref.# 13, 15). Thus, Oono inherently discloses “a method for aligning a plurality of optical elements in an optical device, comprising the steps of: (a) placing at least a first optical element in a first beam path; (b) fixing the first optical element in place without

substantially compensating for errors in optical alignment; (c) placing at least a first optical alignment element (OAE) in the first beam path; and (d) aligning the first beam path to a first desired beam path by adjusting the first OAE, wherein the alignment of the first beam path substantially compensates for cumulative alignment errors in the first beam path.”

Regarding claims 2, 32, 34 and 60, Oono discloses “wherein the first OAE comprises two coupled, non-parallel, and non-co-planar surfaces, wherein at least one of the surfaces comprises a refractive or diffractive element.” (Fig. 3, ref.# 13, 15)

Regarding claims 3, 33, 35 and 61, Oono discloses “wherein the first OAE comprises two coupled, non-parallel, and non-co-planar surfaces, wherein each of the two of the coupled, non-parallel, and non-co-planar surfaces include a reflective element in the first beam path.” (Fig. 3, ref.# 15)

Regarding claims 4, 36, 37 and 62, Oono discloses “wherein the first optical element comprises one of the following: a lens; a mirror; a collimator; a laser; a detector; an optical fiber; a fiber collimator; a light emitting diode; a holographic element; an optical signal modulator; a thermoelectrically cooled laser a grating; and an array of optical devices. (Fig. 3, ref.# 11, 12)

Regarding claims 5, 8, 11, 14, 38, 41, 44, 64, 67 and 70, Oono discloses “wherein the first optical element is a first filter.” (Fig. 23, ref.# 359, 365)

Regarding claims 6, 9, 12, 15, 39, 42, 45, 65, 68, and 71 Oono discloses “wherein the first filter is a first reflective notch filter.” (Fig. 23, ref.# 359, 365)

Regarding claims 7, 31, 59 and 63, Oono discloses “(a1) placing at least a second optical element in a second beam path; (b1) fixing the second optical element in place without substantially compensating for errors in optical alignment ; (c1) placing at least a second OAE in the second beam path; and (d1) aligning the second beam path to a second desired beam path by adjusting the second OAE, wherein the alignment of the second beam path substantially compensates for cumulative alignment errors in the second beam path.” (i.e., Fig. 3, ref.# 15 represents a second OAE in a second optical path with ref.# 13 representing a first OAE in a first optical path)

Regarding claims 10, 40 and 66, Oono discloses “(a2) placing at least a third optical element in a third beam path; (b2) fixing the third optical element in place without substantially compensating for errors in optical alignment ; (c2) placing at least a third OAE in the third beam path; and (d2) aligning the third beam path to a third desired beam path by adjusting the third OAE, wherein the alignment of the third beam path substantially compensates for cumulative alignment errors in the third beam path.” (i.e., Fig. 3, ref.# 20 represents a third OAE)

Regarding claims 13, 43 and 69, Oono discloses “(a3) placing at least a fourth optical element in a fourth beam path; (b3) fixing the fourth optical element in place without substantially compensating for errors in optical alignment ; (c3) placing at least a fourth OAE in the fourth beam path; and (d3) aligning the fourth beam path to a fourth desired beam path by adjusting the fourth OAE, wherein the alignment of the fourth beam path substantially compensates for cumulative alignment errors in the fourth beam path.” (Fig. 23, ref.# 15, represents a fourth OAE)

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Regarding claims 16, 46 and 72, Oono discloses “wherein the adjusting step (d) comprises: (d1) selecting values for a plurality of parameters; (d2) adjusting a placement and an orientation of the first OAE in the first beam path along a plurality of axes; (d3) determining a power level for the first beam path at a location; and (d4) repeating steps (d2) and (d3) if the power level for the first beam path is not approximately a desired power level.” (i.e., the claimed adjusting step is inherent in the alignment of the optical system of Oono.)

Regarding claims 17, 46 and 72, Oono discloses “(d2i) adjusting a placement and an orientation of a second OAE in a second beam path along the plurality of axes; (d3i) determining a power level for the second beam path at the location; and (d4i) repeating steps (d2i) and (d3i) if the power level for the second beam path is not approximately a desired power level.” (i.e., the claimed adjusting step is inherent in the alignment of the optical system of Oono.)

Regarding claims 18, 47 and 73, Oono discloses “(d2ii) adjusting a placement and an orientation of a third OAE in a third beam path along the plurality of axes; (d3ii) determining a power level for the third beam path at the location; and (d4ii) repeating steps (d2ii) and (d3ii) if the power level for the third beam path is not approximately a desired power level.” (i.e., the claimed adjusting step is inherent in the alignment of the optical system of Oono.)

Regarding claims 19, 48 and 74, Oono discloses “(d2iii) adjusting a placement and an orientation of a fourth OAE in a fourth beam path along the plurality of axes; (d3iii) determining a power level for the fourth beam path at the location; and (d4iii)

repeating steps (d2iii) and (d3iii) if the power level for the fourth beam path is not approximately a desired power level.” (i.e., the claimed adjusting step is inherent in the alignment of the optical system of Oono.)

Regarding claims 20-26, 49-55 and 75-80, Oono discloses “(e) fixing the first OAE in the first beam path in place” via an epoxy, welding or soldering. (i.e., it is inherent that each optical element such as the prism ref.# 15 in Oono would be “fixed in position” after it has been adjusted, and it fixing the element via an epoxy, welding or soldering is common knowledge in the art.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

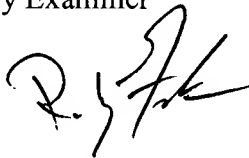
Stavaer, et al. (US 5,953,354), Crawford, et al. (US 4,118,109), Hamar (US 4,468,119), Morimoto, et al. (US 4,850,686), Chapman, et al. (US 6,473,250), Ferguson (US 4,988,167) each discloses any optical system that includes a prism that may be adjusted. Thus, each of these references will inherently teach the claimed invention of “(a) placing at least a first optical element in a first beam path; (b) fixing the first optical element in place without substantially compensating for errors in optical alignment,” (i.e., the optical element other than a prism in the system); “(c) placing at least a first optical alignment element (OAE) in the first beam path,” (i.e., the prism); “and (d) aligning the first beam path to a first desired beam path by adjusting the first OAE, wherein the alignment of the first beam path substantially compensates for cumulative alignment errors in the first beam path.” (i.e., adjustment of the prism)

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name of the examiner.

March 14, 2003